

AMENDMENTS TO THE CLAIMS:

This listing of the claims replaces all prior versions and listings of the claims in the present application:

LISTING OF CLAIMS:

Claims 1-2 (Canceled).

3. (Previously Presented) An electronic imaging apparatus comprising:

an optical system comprising an optical component, the optical component comprising:

a first optical element having at least one surface with a refractive power or at least having one plane surface and two transmitting surfaces;

chemical substance, light transmittance of which is changeable by chemical change according to electric quantity; and

a second optical element having a transmitting surface or a reflecting surface; and

an electronic imaging element for converting an object image obtained through the optical system into an electric signal,

wherein the optical component is constructed and arranged so that the chemical substance is sandwiched between one of optical surfaces of the first optical element and one of optical surfaces of the second optical element, and

wherein the optical system and the electronic imaging element satisfy the following condition:

$$F > a \ (a \leq 3.5/\mu m)$$

where F is a fully opened F value of the optical system under a condition where a focal length is in a shortest state, and reference symbol a represents a pixel pitch in micrometer of the electronic imaging element in a horizontal or vertical direction of the electronic imaging element.

Claims 4-7 (Canceled).

8. (Currently Amended) An electronic imaging apparatus comprising an optical system comprising an optical component, the optical component comprising:

a first optical element having at least one surface with a refractive power or at least having one plane surface and two transmitting surfaces;

chemical substance, light transmittance of which is changeable by chemical change according to electric quantity; and

a second optical element having a transmitting surface or a reflecting surface,

wherein the optical component is constructed and arranged so that the chemical substance is sandwiched between one of optical surfaces of the first optical element and one of optical surfaces of the second optical element,

wherein the first optical element is constructed as a prism, arranged to be contacted, at an exit surface thereof, with the chemical substance, and the second optical element is arranged to be contacted, at a plane surface thereof, with the chemical substance from an opposite side of the prism, and

wherein one of the optical surfaces, different from the exit surface, of the first optical element is configured as a reflecting surface for bending an optical path.

Claims 9-19 (Canceled).

20. (Previously Presented) An electronic imaging apparatus according to claim 8, wherein a refractive index of the prism is equal to or greater than 1.68.

21. (Canceled).

22. (Previously Presented) An electronic imaging apparatus comprising:

an optical system comprising an optical component, the optical component comprising:

a first optical element having a plane surface and a surface with a refractive power or a plane surface and a reflecting surface;

chemical substance, light transmittance of which is changeable by chemical change according to electric quantity; and

a second optical element having a transmitting or reflecting surface and a plane surface; and

an electronic imaging element for converting an object image obtained through the optical system into an electric signal,

wherein the optical component is constructed and arranged so that the chemical substance is sandwiched between the plane surface of the first optical element and the plane surface of the second optical element, and

wherein the optical system and the electronic imaging element satisfy the following condition:

$$F > a \ (a < 3.5/\mu m)$$

where F is a fully opened F value of the optical system under a condition where a focal length is in a shortest state, and reference symbol a represents a pixel pitch in micrometer of the electronic imaging element in a horizontal or vertical direction of the electronic imaging element.

Claims 23-25 (Canceled).

26. (Previously Presented) An electronic imaging apparatus according to claim 22, wherein the second optical element is either one of a parallel plane board, a lens having a surface with a refractive power and a plane surface, and a lens consisting of surfaces each having a refractive power.

27. (Previously Presented) An electronic imaging apparatus according to claim 22, wherein the optical component satisfies the following condition:

$$-0.05 < (R_A - R_C)/(R_A + R_C) < 0.05$$

where R_A is a curvature radius of the surface of the first optical element contacted with the chemical substance and R_C is a curvature radius of the surface of the second optical element contacted with the chemical substance.